

IN THE CLAIMS:

1. (Twice Amended) A method of preparing a sequence of consecutively ordered signal samples for transmission, wherein each signal sample is a digital representation of an analog signal quantity, comprising the step of:
- for each occurrence of two consecutive identical samples in said sequence, replacing the second-occurring one of said two consecutive identical samples with synchronization information.
2. (Twice Amended) A method of transmitting an incoming sequence of signal samples, wherein each signal sample is a digital representation of an analog signal quantity, comprising the steps of:
- for each of said incoming samples,
- (i) transmitting said incoming sample if said incoming sample is not identical to the sample which immediately precedes said incoming sample in said sequence, or
 - (ii) transmitting a synchronization pattern if said incoming sample is identical to said preceding sample.

3. (Twice Amended) A method of incorporating synchronization information into an input stream of signal samples, wherein each signal sample is a digital representation of an analog signal quantity, comprising the steps of:

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- sequentially monitoring the samples in said input stream to detect a match condition characterized by an identity between two consecutive samples in said input stream;
- if a match condition is detected, substituting the second-occurring identical sample with a synchronization pattern.

5. (Twice Amended) A system for transmitting a sequence of signal samples received from an input bus, wherein each signal sample is a digital representation of an analog signal quantity, comprising:

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- storage means coupled to said input bus for temporarily storing samples;
- sample comparison means coupled to said storage means for comparing each sample with the sample which immediately precedes said sample in said sequence, and generating a match signal when said sample is identical to said preceding sample.
- output means coupled to said storage means and said comparison means for transmitting each sample in the absence of a match signal, and transmitting a synchronization pattern in the presence of a match signal.

6. (Twice Amended) A method of transmitting an incoming sequence of signal samples and receiving the transmitted samples, wherein each signal sample is a digital representation of an analog signal quantity, comprising the steps of:

for each of said incoming samples,

- (i) transmitting said sample if said sample is not identical to the sample which immediately precedes said sample in said sequence, or
- (ii) transmitting a synchronization pattern if said sample is identical to said preceding sample;

monitoring said transmissions at a receiving end to detect the occurrence of said synchronization pattern; and

outputting a received sample when a synchronization pattern is not detected, and outputting the immediately previous received sample when a synchronization pattern is detected.

7. (Twice Amended) A system for transmitting an incoming sequence of signal samples and receiving the transmitted samples, wherein each signal sample is a digital representation of an analog signal quantity, comprising:

transmit means for monitoring said sequence of signal samples, transmitting a sample if said sample is not identical to the sample which immediately precedes said sample in said sequence, and transmitting a synchronization pattern if said sample is identical to said preceding sample;

receive means, coupled to receive said transmission, for outputting a received sample when a synchronization pattern is not detected, and outputting the immediately previous received sample when a synchronization pattern is detected.